

**REMARKS / ARGUMENTS**

Claims 1-9, 11-19, and 21-29 stand rejected under 35 U.S.C. § 102(a) as being anticipated by the Applicant's background section. Claims 10, 20, and 30 stand rejected under 35 U.S.C. §103(a) based on the Applicant's background section in view of US Patent No. 5,923,663, issued to Bontemps et al. (hereinafter "Bontemps"). The Applicant respectfully traverses these rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

Initially, the Applicant notes that a goal of patent examination is to provide a prompt and complete examination of a patent application:

It is essential that patent applicants obtain a prompt yet complete examination of their applications. Under the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability in the initial review of the application, even if one or more claims are found to be deficient with respect to some statutory requirement. Thus, Office personnel should state all reasons and bases for rejecting claims in the first Office action. Deficiencies should be explained clearly, particularly when they serve as a basis for a rejection. Whenever practicable, Office personnel should indicate how rejections may be overcome and how problems may be resolved. A failure to follow this approach can lead to unnecessary delays in the prosecution of the application. Manual of Patent Examining Procedure (MPEP) § 2106(II).

As such, the Applicant assumes, based on the goals of patent examination noted above, that the present Office Action has set forth "all reasons and bases" for rejecting the claims.

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## **REJECTION UNDER 35 U.S.C. § 102**

### **I. The Applicant's background section does not anticipate independent claims 1, 11 and 21**

The Applicant now turns to the rejection of independent claims 1, 11 and 21 under 35 U.S.C. 102(a) as being anticipated by Applicant's admitted prior art, in particular the background section of the Applicant's patent application. With regard to the anticipation rejections under 102, MPEP §2131 states that "[a] claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See Manual of Patent Examining Procedure (MPEP) at 2131 (internal citation omitted). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See id. (internal citation omitted).

#### **A. Rejection of Independent Claim 1 under 35 U.S.C. § 102 (a)**

With regard to the rejection of independent claim 1 under 35 U.S.C. §102(a), the Applicant maintains that the Applicant's background section does not disclose or suggest at least the limitation of "determining any one usable media pair from all existing media pairs", as recited by the Applicant in independent claim 1.

The Office Action states that the above claim limitation is anticipated by

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paragraph [04], lines 1-6 in the Applicant's background section. The Office Action interprets the above reference as follows:

auto-MDIX reconfigure channels to properly reassign the media pairs to channels, therefore a usable media pair is determined from all existing media pairs. See Office Action at 2.

This interpretation is incorrect. The Applicant cites the Applicant's paragraph [04], lines 1-6, which states:

In a typical 4-pair conductor or wire system, auto-MDIX may be adapted to automatically detect the order of media pairs 1 and 2 and in certain instances, auto-MDIX *may reconfigure only certain channels* so as to properly re-assign the transmit/receive media pairs to these channels. Auto-MDIX may also be adapted to reconfigure channel ordering for *certain channels* in order to mitigate the effects of improper interfacing and/or configuration. [Emphasis added].

The Applicant points out that paragraph [04], lines 1-6 clearly states that only certain channels are assigned to media pairs, see emphasized text above. Furthermore, the Applicant points out that the following excerpts from paragraph [05], immediately following the cited reference, explicitly contradict the interpretation provided by the Examiner in the Office Action:

Notwithstanding, *Auto-MDIX is limited to reconfiguring only media pairs 1 and 2 and media pairs 3 and 4. . . .* Accordingly, a major drawback with auto-MDIX is that *auto-MDIX does not operate on other combinations of wiring configurations.* For example, auto-MDIX **does not** operate on media pairs 1 and 3 or media pairs 2 and 4 and as a result, may be able to reconfigure and/or correct an improper installation involving media pairs 1 and 3 and media pairs 2 and 4. [Emphasis added.]

Thus, paragraph [05] clearly states, including numerical examples, that the auto-MDIX prior-art disclosed **does not** operate on all media pairs. Thus, it cannot

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determine media pairs from “all existing media pairs,” as claimed in the Office Action. Thus, paragraph [04], lines 1-6 cited by the Examiner does not anticipate the Applicant’s claim limitation.

The Office Action refers for additional support to paragraph [12] and FIG. 1, stating that “the first controller and the second controller is independent and all existing media pair for each controller is independent.” While the first controller and second controller in the auto-MDIX configuration operate independently, as stated in paragraph [12], lines 1-2, paragraph [12] clearly states that neither controller can determine “any one useable media pair from all existing media pairs; selecting any one channel from all existing channels,” as claimed by the Applicant in claim 1.

Paragraph [12] in relevant parts states:

The first controller 110 *may only* control the coupling or cross-connect of channel A or channel B to any of *only* the first media pair *or* the second media pair. Similarly, the second controller may only control the coupling or cross-connect of channel C or channel D to any of *only* the first media pair *or* the second media pair. **Accordingly, the first controller 110 cannot cross-connect channel A or channel B to any of the third media pair or the fourth media pair and the second controller 112 cannot cross connect channel C or channel D to any of the first media pair or the second media pair.** [Emphasis added.]

Thus, it is clear that the controllers 110 and 112 do not allow to “determine any one useable media pair from all existing media pairs”, as explicitly given by example. Moreover, paragraph [11], lines 1-2 state that “FIG. 1 is a block diagram of a conventional auto-MDIX system, which utilizes four (4) media pairs.” Thus, to

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“determine any one useable media pair” in accordance with FIG. 1 would require to determine any one of four media pairs. It is explicitly stated in paragraph [12], as reproduced above, that this is not the case.

The Applicant asserts that the Applicant’s background section does not state, mention, or imply “determining any one usable media pair from all existing media pairs of a first device.” Correspondingly, paragraphs [04], lines 1-6, and paragraph [12], as well as FIG. 1 do not disclose, and hence anticipate the Applicant’s claim limitation.

With regard to the Applicant’s second and third claim limitation, the Office Action refers to the same references as given above, in particular paragraph [04], lines 1-6, paragraph [12], and FIG. 1, giving the same interpretation. The Applicant’s claim limitations read:

**selecting any one channel from all existing channels; and  
assigning said selected any one channel to said any one media  
pair.** [Emphasis added]

As shown above in detail, the Applicant’s background section, and in particular paragraph [04] and FIG. 1, do not support the selection and/or assignment of any one channel from all existing channels. Namely, as described above in detail, the Applicant’s background section describing auto-MDIX explicitly points out in, e.g., paragraph [05] that the prior art is limited in its selection of media pairs.

Hence, the Applicant respectfully submits that the rejection of claim 1 based on 35 U.S.C. §102(a) be withdrawn and claim 1 made allowable, for at least the

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reasons set forth above. The Applicant reserves the right to argue additional reasons beyond those set forth above to support the allowability of claim 1.

**B. Rejection of Independent Claims 11 and 21**

Independent claims 11 and 21 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 11 and 21 are also allowable over the references cited in the Office Action at least for the reasons stated above with regard to claim 1. The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1, 11 and 21.

**C. Rejection of Dependent Claims 2-9, 12-19, 22-29**

Claims 2-9, 12-19 and 22-29 are rejected under 35 U.S.C. §102(a) based on the Applicant's background section.

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 102(a) as being anticipated by the Applicant's background section has been overcome, and requests that the rejection be withdrawn. Additionally, claims 2-9, 12-19 and 22-29 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable.

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Notwithstanding, with respect to claims 2, 12, and 22, the Office Action states that the Applicant's claim limitation "wherein said determining further comprises monitoring at least said any one usable media pair," is anticipated by paragraph [06], lines 1-4 in the Applicant's Application. The Office Action argues that "Ethernet@wirespeed is adapted to detect the conditions on the media and the coupling interface, media pairs are monitored." However, the Applicant's paragraph [06], lines 13-18 elaborate on the cited passage and states:

One drawback with Ethernet@wirespeed is that it does not operate on a broken or damaged media pair 1 or media pair 2 in a cable plant. Moreover, Ethernet@wirespeed does not have the capability to reconfigure wire pairs in order to utilize other good pairs in the cable plant. For example, in a case where media pair 3 or pair 4 may be unused, Ethernet@wirespeed does not have the capability to reconfigure media pair 3 or media pair 4 for communication.

Thus, Ethernet@wirespeed is not capable of detecting **all** the media pairs. Instead, Ethernet@wirespeed only operates on a sub-set of media pairs, as stated in the cited passage from paragraph [06], lines 13-18 above. However, in accordance with independent claim 1, "**any one useable media pairs from all existing media pairs**" is determined. Thus, since Ethernet@wirespeed is not able to monitor all existing media pairs, Ethernet@wirespeed is not enabled to monitor "**at least said any one useable media pair**," as claimed by the Applicant in claim 2. Hence, the Applicant's paragraph [06], lines 1-4 cannot anticipate the Applicant's claim 2, 12, and 22. Thus, the Applicant respectfully requests that the rejection of claims 2, 12, and 22 under 35 U.S.C. §102 is withdrawn, and the

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claims 2, 12, and 22 be made allowable.

With regard to claim 3, 13, and 23, the Office Action states that the Applicant's claim limitation "wherein said monitoring further comprises detecting an existence of a communication signal **on said any one usable media pair**," is anticipated by the Applicant's paragraph [06], lines 1-9. The Office Action states:

Ethernet@wirespeed is used when channel or media characteristics have degraded, therefore usable media pairs are monitored in order to adapt and mitigate the problem).

The Applicant notes that claims 3, 13, and 23 depend on claims 2, 12, and 22, respectively, which depend themselves from independent claims 1, 11, and 21, respectively. For the reasons shown above, claims 1, 11, 21, 2, 12, and 22 are not anticipated by the Applicant's background section, alone or in combination. For this reason alone, the dependent claims 3, 13, and 23 should be made allowable.

Notwithstanding, the cited passage of the Applicant's background section, paragraph [06], lines 1-9 does not provide support for the Applicant's claim limitation "on said any one useable media pair," in claims 3, 13, and 23. As cited above, the Applicant's paragraph [06], lines 13-18 explicitly elaborates on paragraph [06], lines 1-9, cited by the Office Action. Referring to paragraph [06], lines 13-18, it is clear (and shown in detail above) that Ethernet@wirespeed is not capable of operating on **all** the media pairs. Instead, Ethernet@wirespeed only operates on a sub-set of media pairs. However, in accordance with independent

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claim 1, “any one useable media pairs **from all existing media pairs**” is determined. Thus, since Ethernet@wirespeed is not able to monitor all existing media pairs, Ethernet@wirespeed is not enabled to monitor “**said any one useable media pair**,” as claimed by the Applicant in claim 3. Hence, the Applicant’s paragraph [06], lines 1-9 cannot anticipate the Applicant’s claim 3, 13, and 23. Thus, the Applicant respectfully requests that the rejection of claims 3, 13, and 23 under 35 U.S.C. §102 be withdrawn, and the claims 3, 13, and 23 be made allowable.

With regard to claims 4, 14, and 24, the Office Action states that the Applicant’s claim limitation “comprising determining which one of said *all existing media pairs* is capable of facilitating communication at a maximum communication speed” is anticipated by the Applicant’s paragraph [06], because Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift to maximum communication speed.

However, as shown above for claim 1, 2, and 3, paragraph [06], for example lines 13-18, clearly show that Ethernet@wirespeed does not operate on “*all existing media pairs*,” as claimed by the Applicant in claim 4.

With regard to claims 5, 15, and 25, the Office Action states that the Applicant’s claim limitation “comprising cross-connecting *said selected any one channel* to said one of said *all existing media pairs* capable of facilitating communication at a maximum communication speed” is anticipated by the

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Applicant's paragraph [06]. The Office Action states that Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift (reads on cross-connecting) to maximum communication speed.

The Applicant notes that claims 5, 15, and 25 depend on claims 4, 14, and 24, respectively, which depend themselves from independent claims 1, 11, and 21, respectively. For the reasons shown above, claims 1, 11, 21, 4, 14, and 24 are not anticipated by the Applicant's background section, alone or in combination. For this reason alone, the Applicant respectfully request that the rejection to dependent claims 5, 15, and 25 be withdrawn, and the claims 5, 15, and 25 be made allowable.

Notwithstanding, as shown above, paragraph [06], for example lines 13-18, clearly show that Ethernet@wirespeed does not operate on "all existing media pairs," as claimed by the Applicant in claims 5, 15, and 25. In particular. Paragraph [06], lines 15-18, explicitly state that:

Ethernet@wirespeed does not have the capability to reconfigure wire pairs in order to utilize other good pairs in the cable plant. For example, in a case where media pair 3 or pair 4 may be unused, Ethernet@wirespeed does not have the capability to reconfigure media pair 3 or media pair 4 for communication.

Thus, paragraph [06] does not provide any support for "cross-connecting *said selected any one channel*," because it is explicitly said that it is not possible to cross-connect among all the media pairs. Thus cross-connecting among all channels is equally not disclosed and/or taught by the Applicant's paragraph [06].

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With regard to claims 6, 16, and 26, the Office Action states that “comprising determining which one of said all existing media pairs is capable of operating at a reduced communication speed” is anticipated by the Applicant’s paragraph [06]. Initially, the Applicant notes that the previously presented form of claim 6 correctly reads “comprising determining which one of said all existing media pairs **facilitates** operating at a reduced communication speed.” In view of the previously revised claim wording, the Applicant nonetheless addresses the Office Action, however, expressly without conceding and/or discussing any possible interpretative equivalence between the current and the previous claim wording.

The Office Action states that “Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift or reduce transmission speed.” However, as discussed in detail above with respect to claim 1, for example, Ethernet@wirespeed as described in the Applicant’s paragraph [06] is not capable of “determining which one of said **all** exiting media pairs.” Thus, paragraph [06] does not teach or disclose “determining which one of said all existing media pars facilitates operating at a reduced communication speed.”

With regard to claim 7, 17, and 27, the Office Action states that the Applicant’s claim limitation “comprising cross-connecting said selected any one channel to said one of said all existing media pairs . . . [that facilitates] operating at said reduced communication speed.” (Citation amended to reflect previously presented claim amendments). The Office Action states that the

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Applicant's paragraph [06] anticipates the Applicant's claim limitation because "Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift (reads on cross-connecting) to reduce transmission speed."

The Applicant notes that claims 7, 17, and 27 depend on claims 6, 16, and 26, respectively, which depend themselves from independent claims 1, 11, and 21, respectively. For the reasons shown above, claims 1, 11, 21, 6, 16, and 26 are not anticipated by the Applicant's background section, alone or in combination. At least for this reason, the rejection to dependent claim 7, 17, and 27 should be withdrawn, and the dependent claims 7, 17, and 27 should be made allowable.

Notwithstanding, as shown above, paragraph [06], for example lines 13-18, clearly show that Ethernet@wirespeed does not operate on "all existing media pairs," as claimed by the Applicant in claims 7, 17, and 27. In particular, paragraph [06], lines 15-18, explicitly state that:

Ethernet@wirespeed does not have the capability to reconfigure wire pairs in order to utilize other good pairs in the cable plant. For example, in a case where media pair 3 or pair 4 may be unused, Ethernet@wirespeed does not have the capability to reconfigure media pair 3 or media pair 4 for communication.

Thus, paragraph [06] does not teach or disclose "*cross-connecting said selected any one channel*," because it is explicitly said that it is not possible to cross-connect among all the media pairs. Thus cross-connecting among all channels is equally not enabled, and or supported by the Applicant's paragraph [06].

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With regard to claim 8, 18, and 28, the Office Action states that the Applicant's claim limitation "flipping at least one of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs" is anticipated by the Applicant's paragraph [04], lines 1-6. The Office Action states that paragraph [04], lines 1-6 anticipate the Applicant's claim limitation because "auto-MDIX reconfigure channels to properly reassign the media pairs to channels, reconfigure and reassign reads on flipping media pair assignment of all existing media pairs."

The Applicant cites the Applicant's paragraph [04], lines 1-6, which states:

In a typical 4-pair conductor or wire system, auto-MDIX may be adapted to automatically detect the order of media pairs 1 and 2 and in certain instances, auto-MDIX *may reconfigure only certain channels* so as to properly re-assign the transmit/receive media pairs to these channels. Auto-MDIX may also be adapted to reconfigure channel ordering for *certain channels* in order to mitigate the effects of improper interfacing and/or configuration. [Emphasis added].

The Applicant points out that paragraph [04], does not mention, imply, disclose, teach, or suggest "previously defined general channel and media configuration." Thus, the Applicant's paragraph [04], lines 1-6 does not provide any support for the Applicant's claim limitation in claim 8.

Furthermore, the Office Action states that the Applicant's claim limitation "defining said flipped at least one said channel and said media pair assignment as a default channel and media pair configuration" is also anticipated by the Applicant's

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paragraph [04] lines 1-6, because “auto-MDIX reconfigure channels to properly reassign the media pairs to channels, reassigned channel and media pair assignment becomes the current default channel, (reads on current default channel), to maintain communication link.”

However, paragraph [04], lines 1-6, as cited above, does not suggest, teach, disclose, or imply “defining . . . said channel and said media pair assignment as a default channel and media pair configuration.” Despite several readings of the cited passage, the Applicant fails to see how the cited passage reads on the claim limitation by the Applicant in claims 8, 18, and 28. In particular, there is no indication that any default assignments are described.

With regard to claims 9, 19, and 29, the Office Action states that the Applicant’s claim limitation “comprising identifying a status of at least one of said all existing media pairs and at least one of said all existing channels” is anticipated by the Applicant’s paragraph [06], lines 1-4. The Office Action states that Ethernet@wirespeed is adapted to detect the conditions on the media and the coupling interface, media pairs are monitored). The Applicant’s paragraph [06], lines 1-4 states that:

On the contrary, Ethernet@wirespeed provides an algorithm that is adapted to detect the conditions on the media and/or the coupling interface and to select and implement an appropriate methodology for mitigating the effects of improper cabling or interfacing.

However, the cited passage states that Ethernet@wirespeeds “detect[s] the conditions on the media and/or coupling interface.” The reference does not state

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"identifying a status of . . . media pairs and . . . existing channels," as claimed by the Applicant in claims 9, 19, and 29.

Based on at least the foregoing, the Applicant believes the rejection of dependent claims 2-9, 12-19, and 22-29 under 35 U.S.C. § 102 as being anticipated by the Applicant's background section has been overcome, and requests that the rejection to the dependent claims 2-9, 12-19, and 22-29 be withdrawn. Additionally, the claims 2-9, 12-19, and 22-29 depend from independent claims 1, 11, and 21, respectively, and are, consequently, respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1-30.

## **II. Rejection of Dependent Claims 10, 20, and 30 under 35 U.S.C. §103(a)**

Claims 10, 20 and 30 are rejected under 35 U.S.C. §103(a) based on the Applicant's background section, in view of Bontemps et al.

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 102(a) as being anticipated by the Applicant's background section has been overcome, and requests that the rejection be withdrawn. Additionally, claims 10, 20 and 30 depend from dependent claims 9, 19, and 29, the latter of which depend from independent claims 1, 11 and

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21, respectively, and are, consequently, also respectfully submitted to be allowable.

Notwithstanding, the Office Action states that applicant's admitted prior art fails to specifically point out "further comprising storing said identified status" as claimed by the Applicant in the claims 10, 20, and 30. The Applicant respectfully agrees. The Office Action states that Bontemps column 3, lines 50-52, and column 13, lines 30-45 anticipate the Applicant's claim limitation "storing said identified status[, where said status is a status of at least one of said all existing media pairs and at least one of said all existing channels.]" :

The physical layer device monitors its receive input for transmitted communication signals and provided a link detect signal indicative thereof, which reads on storing of status, see also col. 13, lines 30-45, the LINK DETEM signals are used in a logic state machine, which stores current state of the ports. See Office Action at 6.

However, the Applicant notes that the Office Action refers to Bontemps, citing the monitoring of a receive input for transmitted communication signals, whereas the Applicant claims the storing of an identified status of at least a media pair, and at least an existing channel.

Thus, the Applicant believes to have overcome the rejection of claims 10, 20, and 30 under 35 U.S.C. §103(a), and respectfully requests the rejections be withdrawn, and claims 10, 20, and 30 to be made allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1-30.

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**CONCLUSION**

Based on at least the foregoing, the Applicant believes that all claims 1-30 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Attorney at (312) 775-8105.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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